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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/517,521 | 01/09/2006 | Jun Hirano | L9289.04191 | 7130 |

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| EXAMINER |
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ANWAR, MOHAMMAD S

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| ART UNIT | PAPER NUMBER |
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2416

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01/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/517,521 | Applicant(s) HIRANO ET AL. | |
| | Examiner MOHAMMAD ANWAR | Art Unit 2416 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-21 have been considered and are persuasive in regards to Du et al. reference not disclosing repeating a sequence of a data communication period and a sleep period. However, a new reference Shohara et al. disclose does disclose a sequence of data and sleep mode. Therefore, the applicant arguments with respect to claims 1-21 have been considered but are moot in view of the new grounds of rejection.
2. Drawing objections, claim objections and 35 U.S.C. 101 rejections are hereby withdrawn based on the amended claims

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-12 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shohara et al. in view of Du et al. (U.S. Patent No. 6,556,576 B1).

For claims 1, 2, 19, 20, and 21, Shohara et al. disclose a step of transmitting identification information (see column 14 lines 25-31) including an intermittent communication period (see column 11 lines 30-31) and frame information (see column 11 lines 52-54) for carrying out a data communication together with an intermittent communication request (see column 11 lines 29-31) from a communication terminal apparatus to a communication terminal accommodation apparatus (see column 11 lines 12-14); and a step of said communication terminal apparatus entering an intermittent communication mode when said communication terminal apparatus receives said confirmation signal and repeating said data communication and a sleep based on the intermittent communication period (see column 10 lines 40-42, column 11 lines 39-57, column 15 lines 46-48, where a scheduler schedules the time of events and sleep mode and switching back and forth). Shohara et al. disclose all the subject matter but fails to

Art Unit: 2416

mention a step of said communication terminal accommodation apparatus transmitting a confirmation signal of the intermittent communication request to said communication terminal apparatus. However, Du et al. from a similar field of endeavor disclose a step of said communication terminal accommodation apparatus transmitting a confirmation signal of the intermittent communication request to said communication terminal apparatus (see column 8 lines 19-20). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Du et al. confirmation scheme into Shohara et al. intermittent transmission scheme. The method can be implemented in a frame. The motivation of doing this is to conserve power for a wireless terminal.

For claims 3 and 4, Shohara et al. disclose wherein the identification information includes information on the number of frames used for a communication (see column 14 lines 48-54).

For claims 5 and 6, Shohara et al. disclose all the subject matter but fails to mention wherein the intermittent communication period matches the period of the same frame as that of MAC broadcast. However, Du et al. from a similar field of endeavor disclose wherein the intermittent communication period matches the period of the same frame as that of MAC broadcast (see column 7 lines 59-62). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Du et al. MAC scheme into Shohara et al. intermittent transmission scheme. The method can be implemented in a frame. The motivation of doing this is to conserve power for wireless terminal.

For claim 7 and 8, Shohara et al. disclose wherein the communication terminal apparatus does not receive any control channel signal in said data communication in the intermittent communication mode (see column 20 lines 42-45 where a controller device control channel messages).

For claims 9 & 10, Shohara et al. disclose wherein the intermittent communication mode period is shorter than a maximum allowable synchronization holding time of the communication terminal apparatus (see column 20 lines 52-66 where a synchronization scheme is defined by using a timer) .

For claims 11 & 12, Shohara et al. disclose wherein when the intermittent communication mode period is longer than a maximum allowable synchronization holding time, the communication terminal apparatus receives a control channel signal to correct an out-of-synchronization state (see column 20 lines 52-66 which explains how the synchronization is maintained).

For claims 17 and 18, Shohara et al. disclose wherein the intermittent communication period is set to once every $2n$ frames (n : natural number) and an intermittent communication is performed by patterning applications with a plurality of periods (see Figures 3A,B,C and column 14 lines 51-57).

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shohara et al. in view of Du et al. as applied to claims 1 and 2 above, and further in view of Kawano et al. (U.S. Patent No. 4,926,421).

For claims 13 & 14, Shohara et al. and Du et al. disclose all the subject matter but fails to mention wherein the communication terminal apparatus receives a control channel signal for periodically checking the control of the communication terminal accommodation apparatus in the intermittent communication mode period. However, Kawano et al. from a similar field of endeavor disclose wherein the communication terminal apparatus receives a control channel signal for periodically checking the control of the communication terminal accommodation apparatus in the intermittent communication mode period (see column 4 lines 36-53). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Kawano et al. control channel signaling scheme into Shohara et al and Du et al. intermittent communication scheme. The method can be implemented in the hardware and software. The motivation of doing this is to check the status of standby mode terminal.

8. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shohara et al. and Du et al. as applied to claims 1 and 2 above, and further in view of Koo et al. (U.S. Patent No. 7,269,145 B2).

For claims 15 & 16, Duet al. disclose all the subject matter but fails to mention wherein when the communication terminal apparatus' receives a Nack signal from the communication terminal accommodation apparatus, a retransmission frame is added. However, Koo et al. from a similar field of endeavor disclose wherein when the communication terminal apparatus' receives a Nack signal from the communication

Art Unit: 2416

terminal accommodation apparatus, a retransmission frame is added (see Figure 5, column 8 lines 65-67, column 9 lines 1-2). Thus, it would have been obvious to one ordinary skill in the art to include Koo et al. NACK and retransmission scheme into Shohara et al. and Du et al. intermittent communication scheme. The method can be implemented in the packet header. The motivation of doing this is to retransmit a packet in case it is not received by the receiver.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2416

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
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